

## **REMARKS**

The present remarks are in response to the Office Action dated January 13, 2006, in which the Examiner rejected claim 1.

In this response, Applicant has amended claim 1 to clarify the recited features and added a new dependent claim 2 directed to one of Applicant's embodiments. No new matter has been added.

The Applicant responds to the Examiner's Detailed Action and respectfully requests the Examiner place the pending claim in a state of allowance.

### **A. Prior Art Rejection (35 USC § 103)**

The Examiner has rejected claim 1 under 35 U.S.C. §103 as being unpatentable over Japanese Reference, Bridgestone Tire JP 60-2222071 (hereinafter referred to as "Bridgestone"). In view of the current amendments, Applicant respectfully disagrees. Please note that the Japanese Reference Bridgestone has been translated and is attached as Exhibit A.

As amended, claim 1 now recites a spherical, luminescent golf ball having a spherical outer layer having a first spherical center; a substantially spherical inner chamber comprising a first hemisphere having a first liquid compound, a second hemisphere having a second liquid compound, and a planar circular partitioning element configured to border the first and second hemispheres and separating them; with the substantially spherical inner chamber having a second spherical center that coincides with the first spherical center of the spherical outer layer, which is configured to provide substantially even weight distribution throughout the ball.

As acknowledged by the Examiner, Bridgestone did not disclose all the elements of the previously presented claim 1. Now, as amended, Bridgestone simply does not disclose nor suggest any luminescent golf balls having a spherical outer layer including a first and a second spherical center, and a substantially spherical inner chamber having a first and second hemisphere with a planar circular partitioning element which borders and separates them. And neither did Bridgestone describe or suggest that the second spherical center of the spherical inner chamber coincides with the first spherical center of the outer layer, to provide even weight distribution.

Similarly, Bridgestone nowhere describes or suggests the elements of Applicant's newly amended claim 1. Bridgestone describes light emitting balls with insertable containers having separate sections housing light producing chemical reagents. The containers of chemicals are inserted within the ball and when the ball is hit by a player swinging a golf club or the like, a separating membrane (e.g., glass) breaks within the container and the reagents mix. In Figures 2a-c, Bridgestone illustrates spherical shapes of the balls, e.g., having a core (22) and an outer shell 22 (Figure 2a). Furthermore, in Figures 3a-3g, Bridgestone shows a method of inserting the container into a ball. Specifically, Bridgestone states that the "light emitting bodies" or containers may have ribbon-like, cylindrical, or button-like shapes. Further, in Figure 3f, for instance, a light emitting body 34 is shown which passes through the core 21 in a diametrical direction. Bridgestone also notes that this embodiment has the most stable and simple construction with a high-light emitting effect.

In fact, Bridgestone teaches cylindrically shaped inner containers as well as cylindrical, rectangular, or ribbon-like shapes for the inner containers (see Bridgestone Figure 1a-d and the related description about practical example 1). Thus, Bridgestone does not describe nor suggest any spherical outer layers having a first spherical center nor a second spherical center that coincides with the first spherical center of the outer layer. Even if Applicants were to assume that Figure 3F may suggest two hemispheres, as mentioned earlier, Figure 3F shows a cylindrically shaped container and not a spherical inner chamber having a first and a second hemisphere.

By definition, the geometric properties of a spherical inner chamber is significantly different from the properties of a cylindrical inner chamber. In a sphere, all the set of points are equidistant from its center, whereas in a cylinder, a cylindrical center is much more difficult to identify because its center can only be identified as a function of the length of the two parallel planes of the directrix. Thus, simply put, a spherical and cylindrical chamber cannot be equated. Another critical difference lies in the fact that a spherical and a cylindrical inner chamber in our present application will provide different moments of inertia. A moment of inertia is defined as a measure of a body's resistance to angular acceleration, which quantifies the rotational inertia of an object. The moment of inertia of a rotating object associated with a sphere is a function of mass and radius ( $\frac{2}{5}mr^2$ ). However, the moment of inertia for a cylindrically shaped object is a function of mass, radius, and length. Simply put, Bridgestone simply does not describe a spherical inner chamber as recited in Applicants' claim.

Even if were to be argued that Bridgestone alludes to a sphere, Bridgestone in fact teaches away from using hemispheres and spherical inner chambers because Bridgestone states that the cylindrically shaped container as shown in Figure 3f is the preferred embodiment because it is the most stable and simple to manufacture.

Furthermore, although Bridgestone shows that the reagents can be housed inside the ball within spherically shaped containers, Bridgestone however does not show nor suggest that the reagents can be housed within separate hemispheres.

Additionally, Bridgestone does not show any planar circular partitioning elements separating a first hemisphere and a second hemisphere, as recited in Applicant's claim 1. Bridgestone teaches a separating partition, for example, element 32 as shown in Figures 3a-3d. But this partition is not planar because the separating partitions 32 are shown coupled to the surface of the ball and therefore must be rounded.

Moreover, Bridgestone neither teaches nor suggests that the configurations provided in its figures would result in even weight distribution. Bridgestone basically teaches an inner shell and an outer shell as its basic configuration with different container shapes which can be inserted within the inner shell. Because Bridgestone is silent on any configuration favoring a spherical inner core or chamber, much less teaching or suggesting that such a spherical inner chamber has a second spherical center coinciding with the first spherical center of the outer layer to provide substantially even weight distribution, Bridgestone fails to describe or suggest Applicant's claim.

Although it may seem at first glance easy to conclude that any of the configurations as shown in Bridgestone may cause the weight of the ball to be

inherently evenly distributed based on the location and symmetry of the inner shell, this is not so. Some of the cylindrical configurations illustrated in Bridgestone would cause uneven weight distribution and affect the moment of inertia, as explained previously. This in turn, would be detrimental to the rotational effect caused by not having uniform and even weight distribution of the contents of the ball.

Therefore, in view of all the foregoing reasons, Applicant submits that Bridgestone fails to teach or suggest all the limitations of claim 1. Since claim 2 must include, by way of its dependency, *inter alia*, all the limitations of claim 1, claim 2 also overcomes the prior art rejection.

F. Conclusion

Consequently, the limitations of claims 1 and 2 are not taught or suggested by the prior art cited. Since the claims overcome the 35 USC §103 rejection, Applicant submits that the claims are now patentably distinct and in condition for allowance, which action is respectfully requested.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'M. A. Kerr', is written over a horizontal line.

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